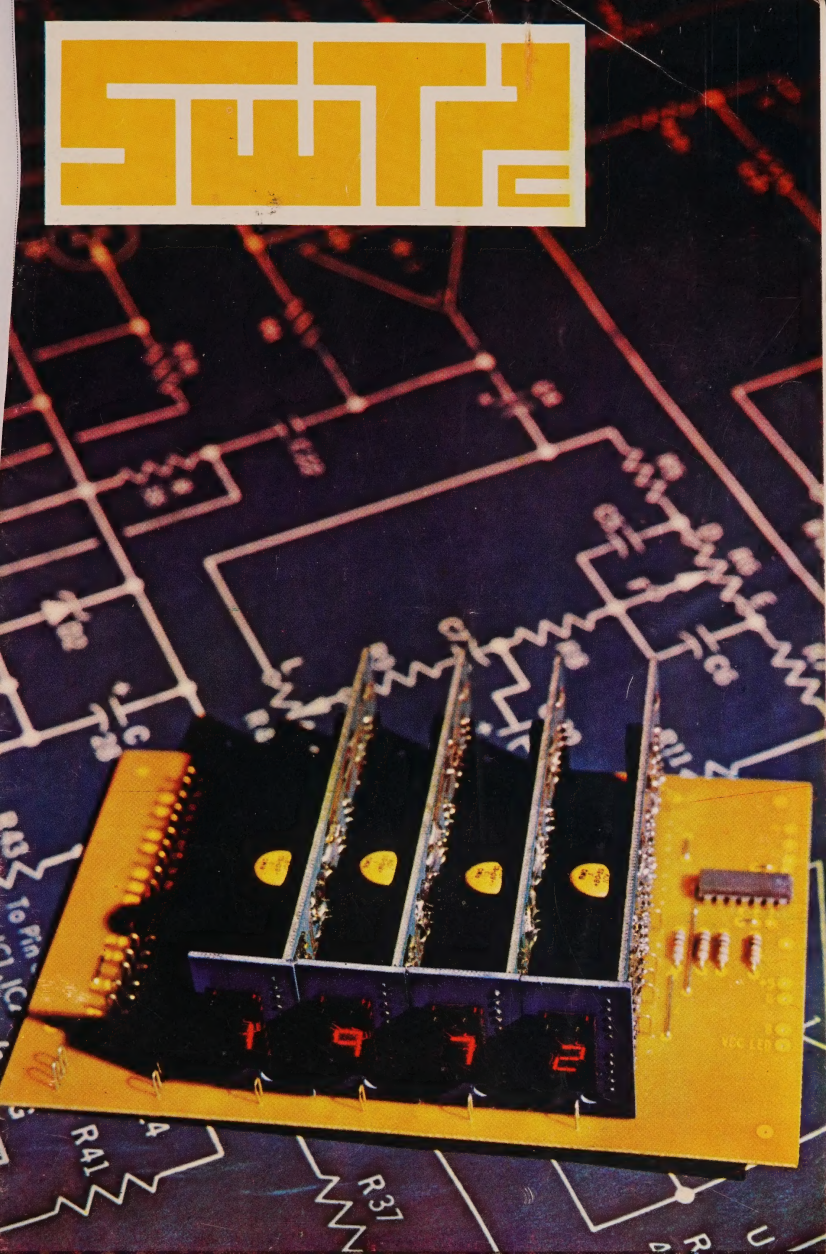
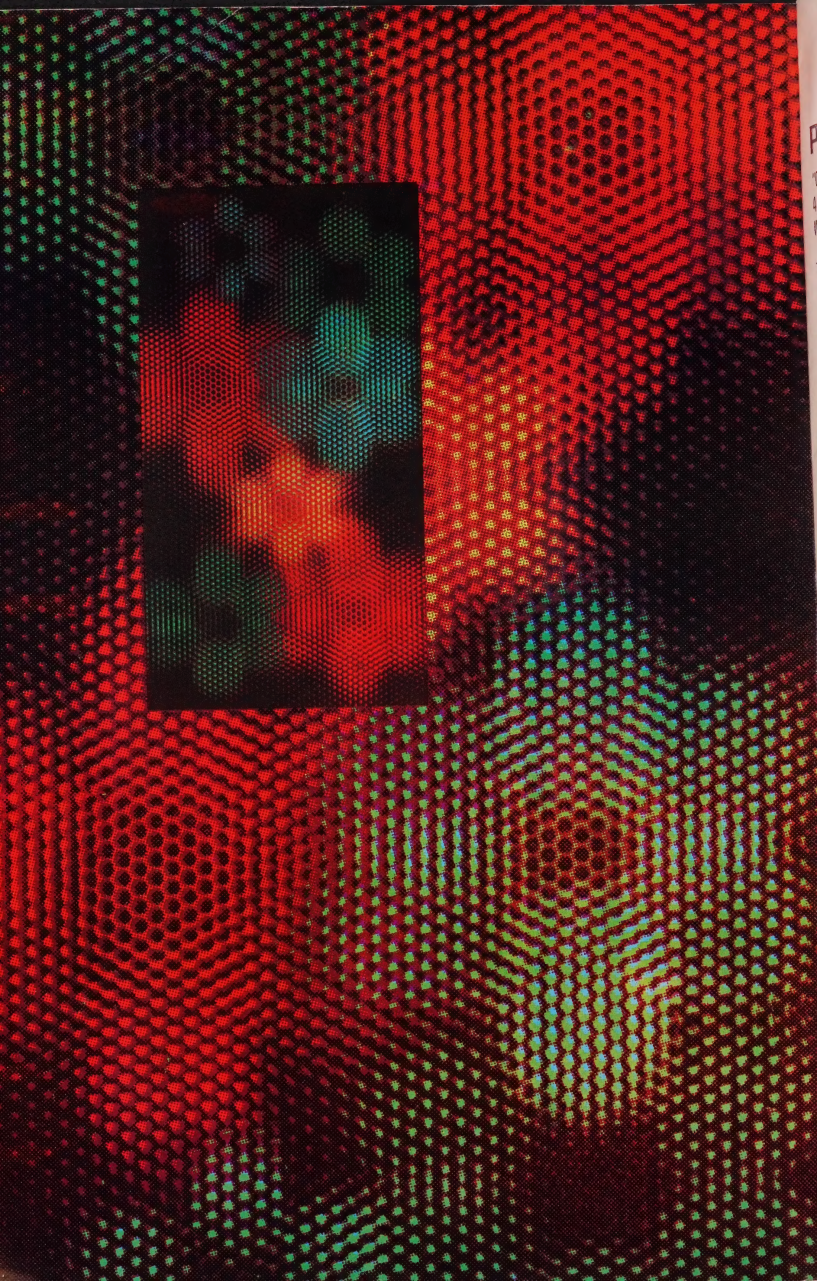
SWTPC





TWO UNIQUE COLOR ORGANS

PSYCHEDELIA I

"CLASSICAL" FILTER SYSTEM
4 – 800 WATT CHANNELS
WORKS WITH ANY SOUND SYSTEM

The best of it's type. Psychedelia I is the only color organ available using a ramp triggering system. This unique system pioneered by SwTPC, produces a light output that is closely proportional to the sound level in each channel. There are no circuits that produce a lag in light response, other than the lamps in the display itself. Lamp power is changed at a 60 per second rate.

The four channels are generated by op-amp driving active filters. These filters have 12 dB per octave slopes to minimize crosstalk and bleed through from one channel to another. The input is transformer isolated and may be connected to any speaker terminals with safety. Due to the sensitivity of this circuit only a fraction of a Watt is needed to drive the system and as a result the connection cannot possibly affect your sound system in any way.

Psychedelia I corrects automatically for variations in sound level. A compressor circuit with 40 dB range allows you to operate your system at any level from 5 Milliwatts to 50 Watts without readjusting the color organ controls. This completely eliminates the need to reset sensitivity every time you change the volume.

QX-Four Channel Kit	4 lbs	$44.95
QXA Assembled Kit	4 lbs	$60.00

SPECIFICATIONS

Dimensions (circuit board w/parts)	8¾"x5½"x2½"
Input Impedance: stereo	100 Ohms
monaural	50 Ohms
Bands: Low	approximately 60 Hz – 240 Hz
Med. Low	240 Hz – 960 Hz
Med. High	960 Hz – 3840 Hz
High	3840 Hz – 15,360 Hz
Power Handling capability	800 watts of 117 Volt lamps per channel
Circuitry Power Requirements	117 Volts 100 Watts

PSYCHEDELIA II

NEW DIGITAL SYSTEMS
4 – 800 WATT CHANNELS
WORKS WITH ANY SOUND SYSTEM

A new approach to color organ circuits. Psychedelia II uses a sampling system and digital counting techniques to separate the sound input into four channels. The sample rate is adjustable from 5 to 50 times a second to produce the amount of display activity you want. The display action that results from this system is considerably different from the more common filter type color organ. First of all there is only one color lamp on at any time. However persistance of vision will produce the illusion of all lamps being on under some conditions of input signal. Due to the sampling process used, the display is more active as it switches rapidly from one color to another. This also tends to make the display seem more random. The display will not follow music in quite as obvious a fashion as a filter color organ. Since it will not sync with the music in the same way twice the display will be different even if the same selection is played again.

The input is transformer isolated and may be connected safely to any systems speaker terminals. The sensitivity is great enough to prevent loading of the amplifier and you will not effect the sound system in any way by using this color organ.

QX-11 Four Channel Kit	4 lbs	$44.95
QXA-11 Assembled Kit	4 lbs	$60.00

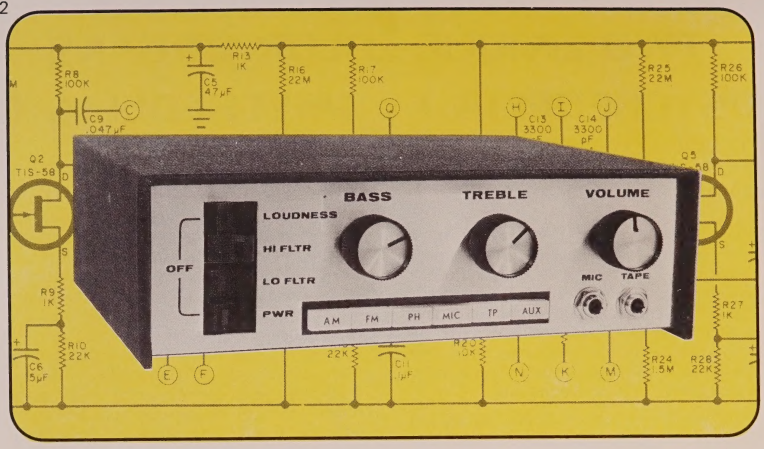
SPECIFICATIONS

Dimensions (circuit board w/parts)	8¾"x5½"x2½"
Input Impedance: stereo	100 Ohms
monaural	50 Ohms
Bands: Low	approximately 60 Hz – 240 Hz
Med. Low	240 Hz – 960 Hz
Med. High	960 Hz – 3840 Hz
High	3840 Hz – 15,360 Hz
Power Handling capability	800 watts of 117 Volt lamps per channel
Circuitry Power Requirements	117 Volts 100 Watts

Display Cabinet - 22x14x12 Wood grain finished display cabinet semi-kit. Seven lamp mounts must be installed and wired to finish. Matches most bookshelf size speaker systems.

QD Shipped by Express, bus, or UPS only – too large to mail $26.50

Southwest Technical Products Corporation, 219 W. Rhapsody, San Antonio, Texas



The FET Preamp is designed to be used with any of our power amplifiers. The circuit is powered from the main amplifier supply, or any other supply of 40 Volts DC. This preamp matches our power amplifiers in quality and performance.

Controls include Bass, Treble, Loudness, high and low frequency filters, and balance. Front panel microphone input and recorder output jacks, and a pushbutton input selector are additional features.

Chassis front and rear trim panels are a brushed red-gold. The top is covered with a textured black vinyl.

Circuit boards are our usual superior quality G-10 fiberglass type. A preamp with this tremendous combination of features and performance would cost at least three times this much anywhere else. Kit not recommended for beginners due to complex switch and control wiring required.

FET STEREO PREAMP

SILICON FET TRANSISTORS

LOW NOISE - HIGH SENSITIVITY

COMPATIBLE WITH ANY AMPLIFIER

PUSHBUTTON INPUT SELECTOR

HIGH AND LOW FILTERS

SWITCHED LOUDNESS COMPENSATION

156 Complete Kit - less power supply
Shipping Weight 4 lbs... **$44.50 + postage**

SPECIFICATIONS

Sensitivity..... for 1 Volt RMS output 2.0 MV.- Phono and Mic. 100 Mv.- High Level inputs
Frequency..... Flat with + 1 db 20-20,000 Hz.
Distortion ..... at 1 Volt RMS output .05% or less any input
Noise..... All channels 65 db below 1 Volt RMS output
Maximum Input ..... 100 Mv.-Phono and Mic. 10 Volts-High Level inputs.
Power Required ..... 40 Volts DC (or more) 12 Ma.

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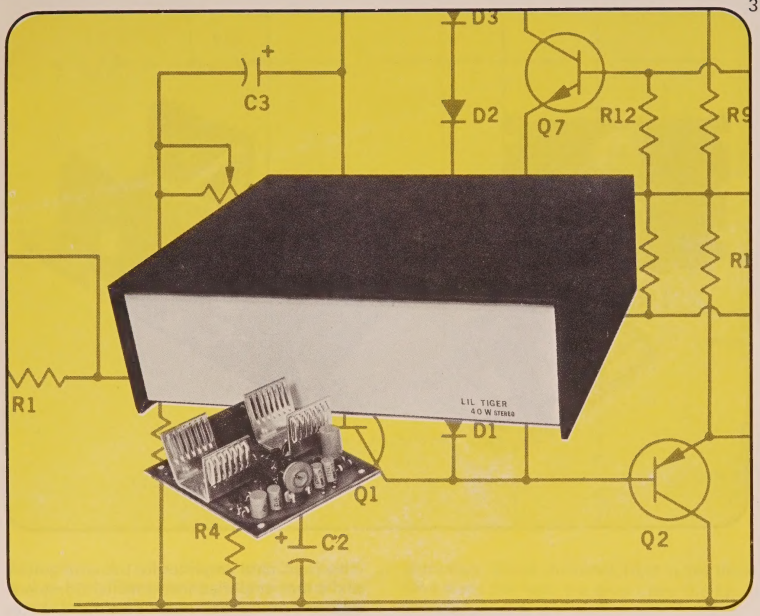


This fantastic little amplifier has been built by thousands of people since it was introduced over three years ago. There is still nothing that can compare with this amplifier in its price range. Quality parts and circuit boards, plus the new brushed gold front panel make this amplifier a real "best buy".

140-CX Lil Tiger Amplifier -
Shipping Weight 6 oz. **$11.10**
P-140 Power Supply and Chassis -
Shipping Weight 6 lbs. **$15.00**
Complete Stereo Amplifier Kit (consisting of 2
140-CX and P-140)..... **$37.00**

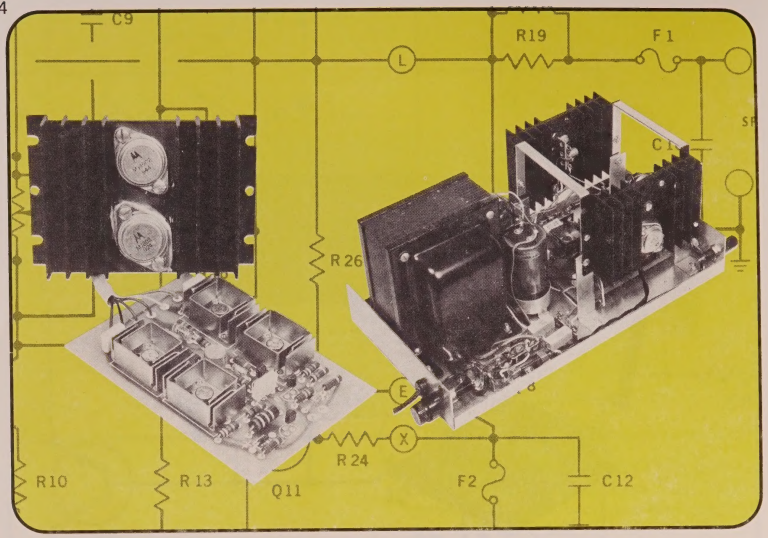
SPECIFICATIONS

Power Output ..... **18 Watts RMS .22 Watts IHFM per channel into an 8.0-Ohm load with 45-Volt power supply**
Distortion ..... **Less than 1% total harmonic up to a full rated output**
Frequency Response.....**3db down at 20 Hz and 100,000 Hz**
Input Impedance..... **Approximately 5000 Ohms**
Output Impedance..... **Approximately 0.1 Ohm (damping factor of 80 with 8-Ohm load)**
Hum and Noise ... More than 80 db below one Watt
Sensitivity ..... **1.5-Volt input for 20 Watt output**
Supply Voltage..... **12 to 45 Volts d.c.**

LIL TIGER

ALL SILICON TRANSISTOR CIRCUIT
OUTPUT SHORT PROTECTION
COMPLEMENTARY OUTPUT STAGE
FIBERGLASS CIRCUIT BOARD

Southwest Technical Products Corporation, 219 W. Rhapsody, San Antonio, Texas



UNIVERSAL TIGER MK II

Southwest Technical Products is proud to offer the latest model of the amplifier that not only has been "wiping out" all other amplifiers at test clinics across the country, but which is also better than the test equipment. At anything less than full rated power output the amplifier distortion plus noise is typically less than .02% (see graph next page). There are few instruments that will accurately measure distortion this low. If the oscillator used does not have distortion considerably less than .01% it cannot possibly give an accurate test result.

On this latest version, we have added an idle current adjustment on the board as standard equipment and added a Volt-Amp limiting circuit. This in addition to the output current limiting that is inherent in our circuit provides the amplifier with triple protection against damage in audio applications.

This is an ideal amplifier for use with guitars and other amplified instruments. Combined with one of our instrument preamps it makes an outstanding bass, or standard amplifier system. Organs, or anything else requiring a powerful, but clean amplifier can make good use of the Universal Tiger.

This kit has step-by-step assembly instructions and pictorial drawings to make assembly as easy as possible. Nothing but the best parts and our usual fiberglass circuit board go into this kit.

UT-K Kit (left picture) -
Shipping Weight 3.6 lbs. **$30.00**
UT-M Single Channel Kit (right picture) 11x6x5-
Shipping Weight 14 lbs. **$60.00**
2UT-M Two Channels -
Shipping Weight 28 lbs. **$115.00**
UT-MA Assembled and tested -
Shipping Weight 14 lbs. **$90.00**
2UT-MA Two Channels Assembled and tested -
Shipping Weight 28 lbs. **$175.00**

SPECIFICATIONS

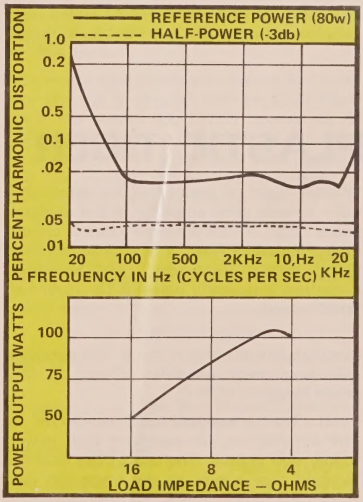
Power Output .... Up to 100 Watts RMS (see graph)
Total Harmonic Distortion
plus hum and noise ..... (see graph)
Input Impedance ..... 20,000 Ohms
Damping Factor..... Over 100 with 8 Ohm load
Sensitivity .....1.5 Volts RMS for full Output
Hum and Noise.... More than 80 db below 10 Watts
Bandwidth ..... 3.0 db down at 0.5 and 250 KHz

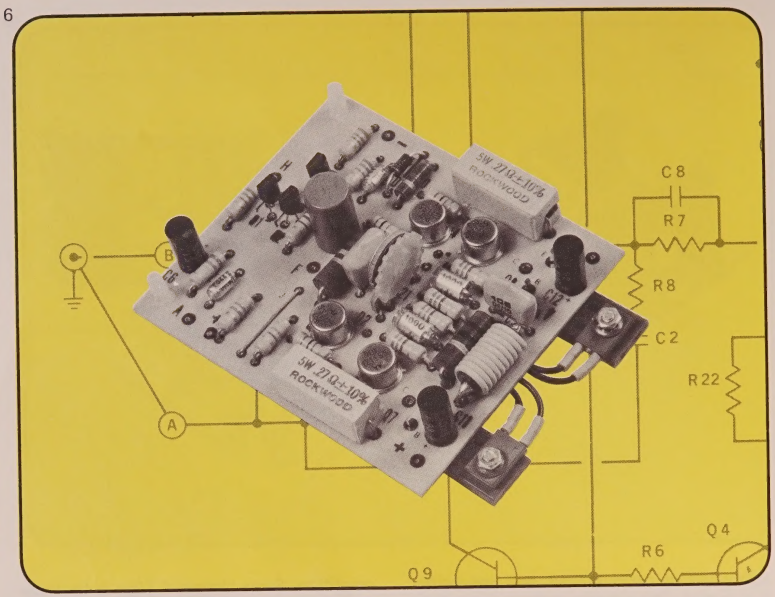
Distortion at rated output and 3db below full output. The superior performance of the amplifier is obvious. The increase in low frequency distortion at full rated output is due to the large amount of supply ripple that occurs at these power levels. This will cause a higher reading on the distortion meter, but does not represent an actual distortion of the input signal.

The complete single channel kit (UT-M) is available for use in instrument systems, organs and PA systems. It may be used with any multispeaker installation having a total impedance at the amplifier output terminals of 4 Ohms or more. Matches any 25 Volt Line installation directly.

The custom installation kit, UT-K is supplied with only the driver board and parts, plus the heat sink (1) and output transistors. This kit may be used for custom designs and in cases where the proper supply voltage is already available.

For the "Hi Fi Freaks" who want the ultimate stereo system we are making a special offer of two complete kits at less than twice the price. Any amplifier system using a common power supply will have more crosstalk and less peak power than two independent amplifiers. Since Universal Tiger is for those who want the best, we only offer the kit in single channel form.





PLASTIC TIGER

"Plastic Tiger" is the answer for those who want a really good amplifier in the medium power range. It uses the same superior circuit as the "Universal Tiger", but with economical plastic output transistors. Total harmonic distortion is typically below 0.1% up to full rated output.

Compare the specifications of this amplifier with any other amplifier offered in this power range.

Plastic Tiger is available, as shown above, as just an amplifier, or complete with power supply and chassis. The chassis has brushed red-gold trim panels on the front and rear and a textured black vinyl covered top.

Pictorial assembly drawing and step by step instructions make this kit an easy project for anyone with even an elementary knowledge of electronic construction.

185 "Plastic Tiger" kit - circuit board and parts for one channel only.- 6 oz. **$18.50**
185-C Complete Stereo Amplifier - consists of two 185 kits as above plus chassis and power supply as shown.- 8 lbs. **$55.00**
185-CA Assembled Stereo Amplifier-8 lb.. **$75.00**

SPECIFICATIONS

Power Output ..... **Either Channel Singly: 36 Watts RMS-8 Ohm load 40 Watt IHFM-8 Ohm load**
Both Channels Driven: 30 Watts RMS-8 Ohm load
Total Harmonic Distortion.... **Less than 0.1% up to rated output**
Input Impedance..... **22 K Ohms**
Output ..... **Less than .25 Ohms 20-20,000 Hz**
Sensitivity..... **1.25 Volts RMS input for 30 Watts output**
Hum & Noise ..... **More than 80 db below 10 Watts — less than 1.0 Mv at output**
Frequency Response ..... **1.0 db down at 5 and 100,000 cycles**
3 db down at 2 and 150,000 cycles
Stability..... **Unconditionally stable with any type load impedance, or input impedance.**
Protection ..... **Current into shorted load limited by inherent characteristics of circuit**

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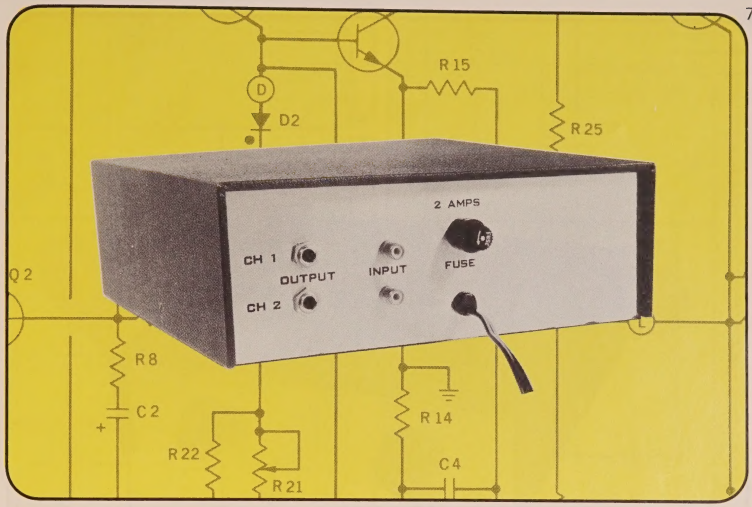


540

NEW – POWER DRIVER IC DESIGN

VOLT-AMP PROTECTION CIRCUIT

COMPLIMENTARY OUTPUT TRANSISTORS

"540" is a new direction in power amplifier design. The entire circuit consists of the new 540 Power Driver integrated circuit and two big husky 10 Amp complementary power transistors.

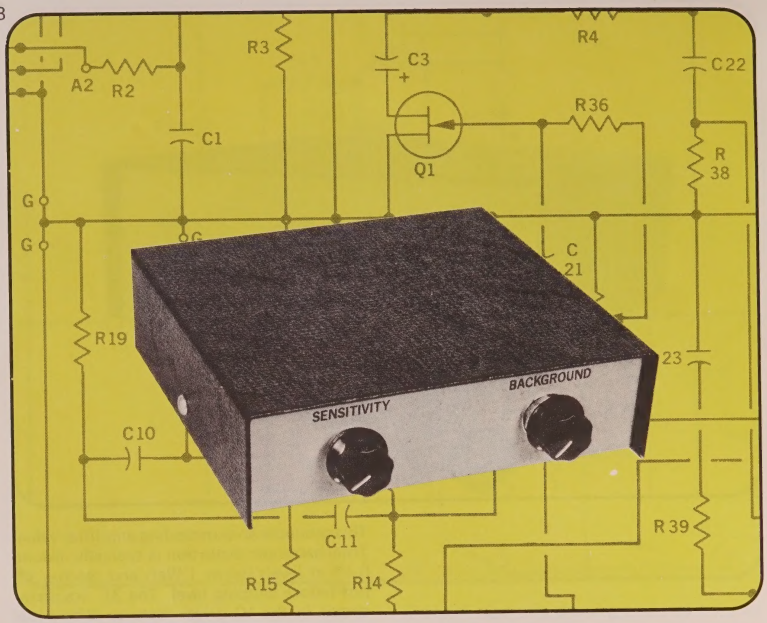
This produces an outstanding amplifier value. Total harmonic distortion is typically around 0.1% at levels below 1 Watt and reaches 1% just before clipping level. The 31 transistor circuit in the IC driver features differential amplifier input and Volt-Amp protection of the output circuit. Only with an integrated circuit could all these features be included at this price.

The chassis trim panels are brushed Red-Gold and the top is covered with textured black vinyl. As always the circuit boards are of fiberglass and only quality parts are supplied in the kit. "540" is supplied with pictorial and step by step instructions. Can easily be assembled by anyone who has learned how to solder.

"540" Amplifier kit - one channel - board and parts only - 6 oz. **$10.50**
"540-C" Complete Stereo Amplifier - consists of two "540" kits as above and chassis with power supply shown - 6.0 lbs..... **$37.50**

SPECIFICATIONS

Power Output ..... **20 Watts IHFM**
18 Watts RMS-one channel
15 Watts RMS-both driven
Distortion ..... **Less than 1% total harmonic at full output. Less than 2% at levels below 1 Watt**
Frequency Response ..... **1 db down at 5 and 100,000 Hz**
Hum and Noise.... **More than 80 db below 10 Watt**
Sensitivity..... **.4 Volt RMS for full output**



SONOLITE-COLOR ORGAN

USE WITH ANY MUSIC SYSTEM

CONTROLS UP TO 800 WATTS

EASY TO INSTALL

Simplified Construction - With Pictorial Wiring Diagrams - Higher Power - Now 8 Amps RMS

Although inexpensive, the Sonolite features a full wave "Triac" control system. The input system is completely isolated from the power control section by a lamp-Photocell assembly. No danger of blown fuses, or shocks. This versatile circuit can also be used as a motor speed control, lamp dimmer, or as a remote power control system. Use a "Sonolite" with each amplifier in your musical group to produce a light show with music. The high power control rating of the Sonolite makes it possible to operate several floodlamps from each unit.

X147C Kit - Sonolite Color Organ - Shipping Weight 2 lbs. **$11.00**

147 Assembled - Sonolite Color Organ - Shipping Weight 2 lbs..... **$16.50**

SPECIFICATIONS

Controlled Power ..... **800 Watts**
Input Power - (Full Output) ..... **.5 Watt**
Input Impedance ..... **8 or 16 Ohms**
Controls ..... **Background Sensitivity Size 5x5x1¼**

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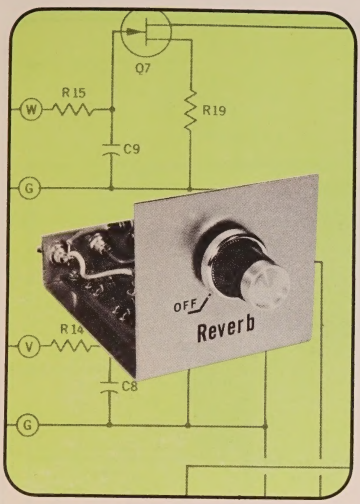
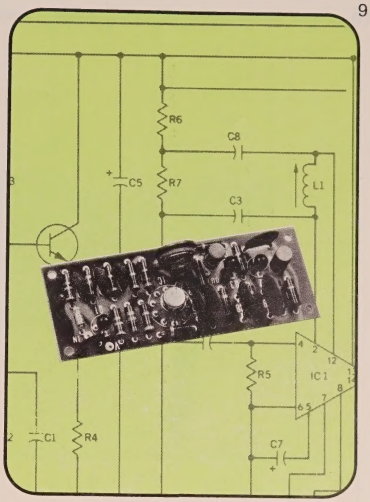




REVERB ADAPTOR

Use this add-on unit to put reverberation into music system. The Hammond Organ reverb unit used in this system adds the "concert hall" reverberation time to the music electronically. Makes your listening room have the same sound acoustics as a large hall. The four transistor driver-amplifier unit plugs in between your present preamp and amplifier. Power for the adaptor can be obtained from any of our amplifiers. The circuit may be used with either vacuum tube or transistor systems.

139-C Complete kit including board, springs & chassis **$18.75**
139 Board only **$2.00**
Z-1C Reverb Springs only - 11" long
Shipping Weight 2 lbs. **$10.00**

SPECIFICATIONS

Nominal Delay ..... **37 Milliseconds**
Reverberation ..... **0.50%-Control on panel**
Power ..... **40 Volts Minimum @ 25 Ma.**

SCA MULTIPLEX ADAPTOR

Now get "Music Only" FM Programs

Sensational new approach to detection of the multiplexed subcarrier used by many FM stations. This adaptor may be used with any FM radio or tuner. New "phase locked loop" integrated circuit provides both the filtering and FM detector needed to receive these broadcasts. Our kit is complete with instructions for installing the adaptor in your tuner. Power required is 12.0 Volts DC @ Ma.

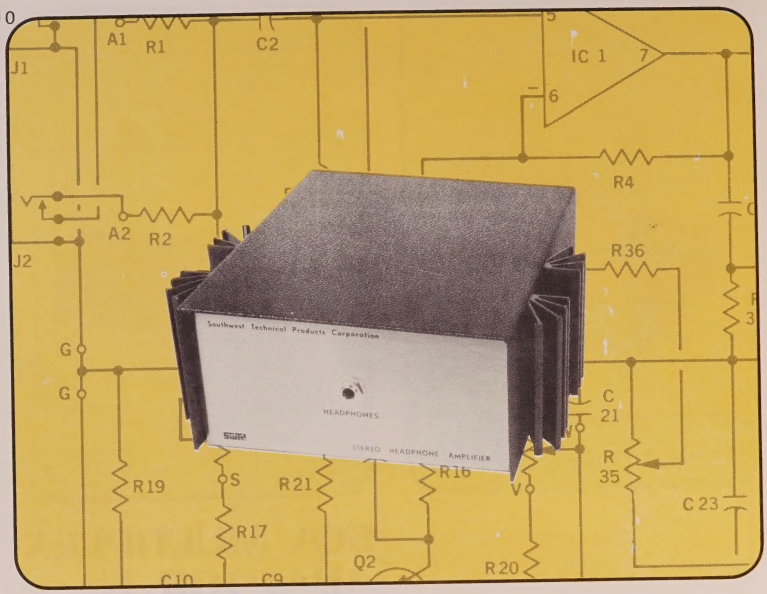
Use of the "phase locked loop" system results in a circuit with superior rejection of unwanted interfering signals, better fidelity and requires no inductors, or tuned circuits.

Note — Commercial use of this circuit for background music systems is illegal.

PLL - 1 Shipping Weight 2 lbs. **$14.50**
Now available with built-in squelch circuit to eliminate noise if your station drops its SCA carrier.
PLLS - Shipping Weight 2 lbs. **$19.50**
PLLAS - Assembled -
Shipping Weight 2 lbs. **$29.95**

SPECIFICATIONS

Input Impedance ..... **.5 Meg. Ohms**
Output Level ..... **1.0 Volt**
Detection Range ..... **50-80 KHz**



HEADSET AMPLIFIER

DESIGNED SPECIFICALLY TO DRIVE HEADSETS

INDEPENDENT POWER SUPPLIES FOR EACH CHANNEL

CLASS A OPERATION – LOW DISTORTION AT ANY LEVEL

LESS THAN .02% THD UP TO RATED OUTPUT 20 Hz to 20,000 Hz

FLAT + 0.5 DB 10 to 100,000 Hz

HUM AND NOISE – 75 DB below 1.0 WATT

At last an amplifier designed specifically for driving a headset. This amplifier has all of the features found in the best power amplifiers, but provides a power output suitable for driving headsets safely. Normal power amplifiers are dangerously high in output for use with a headset, and often must be operated at levels where the distortion and noise characteristics are not optimum. Headset outputs generally have large value dropping resistors in series with them to limit power, but this completely ruins the damping characteristics of the amplifier as far as the headset is concerned. This amplifier will deliver 2 Watts per channel of ultra clean class A power with a damping factor greater than 20 into an 8 - 16 Ohm headset.

Construction is easy. All parts except transformers and connection jacks mount on two of our fiberglass circuit boards. The 7x8x3½ deep case is finished in a beautiful new dusky chrome and has a black vinyl covered steel top. This kit is a must for anyone using headsets if they want the best possible sound quality from their system.

202-C Headset Amplifier Kit -
Shipping Weight 7 lbs. **$44.50**

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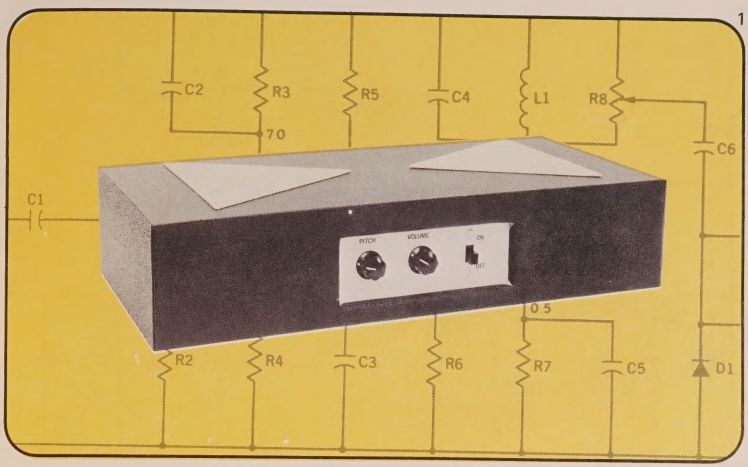

THEREMIN ELECTRONIC MUSICAL INSTRUMENT

FET VOLUME CONTROL

USE WITH ANY INSTRUMENT

VINYL COVERED CABINET – MATCHES INSTRUMENT AMPLIFIER

POWERED BY 9 VOLT BATTERY

A modern, solid state version of the Theremin all electronic musical instrument. Two antenna plates, operated by hand capacity, control the pitch and volume of the sound. Add this to your combo for a really unique and different sound.

Our revised version of this instrument now has fully shielded coils and a new tuning circuit. Adjustments are fast and noncritical. The rugged vinyl covered cabinet matches our MMM Instrument amplifier.

142 Complete kit for Theremin - with cabinet & Antenna - Shipping Weight 4 lbs. **$22.50**
TE Theremin-electronics kit only (no case) - Shipping Weight 9 oz. **$16.50**

SPECIFICATIONS

Controls ..... **Pitch - Zero set - Volume**
Approximate Sound Range ..... **30 to 15,000 Cycles**
Volume Range ..... **50 to 60 db Change**
Power ..... **Internal 9 Volt Battery**

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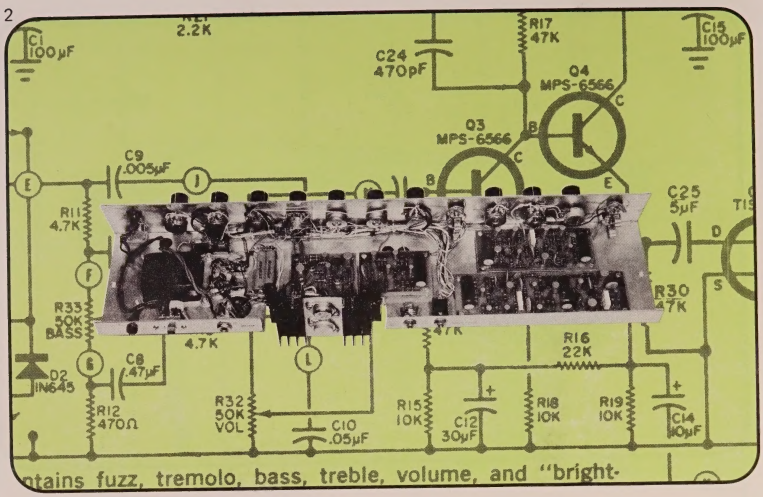


M/M/M INSTRUMENT AMPLIFIER

TREMOLO REVERB AND FUZZ

FOOT SWITCH CONTROL OF TREMOLO AND REVERB

FET INPUT STAGE FOR QUIET OPERATION

60 WATT RMS OUTPUT
150 WATTS PEAK

Time tested by professional combo groups, this instrument amplifier can't be touched by any similar professional unit as far as price, quality and versatility are concerned. A complete custom sound system can be purchased for your electric guitar or other type stringed instrument. If you already have some type of system for your instrument, then special sections can be added for desired effects. Custom fit your instrument as to your needs. This versatile system includes controllable fuzz, tremolo, and reverb: also, a clean 60-Watt booster. A straight preamplifier for vocal or voice announcements can also be added. Now being supplied with short proof output circuit. No more blown transistors from accidentally shorted speaker leads.

FET INPUT STAGE
SHORT PROTECTED AMPLIFIER
PICTORIAL ASSEMBLY INSTRUCTIONS
BRUSHED FINISH FRONT PANEL

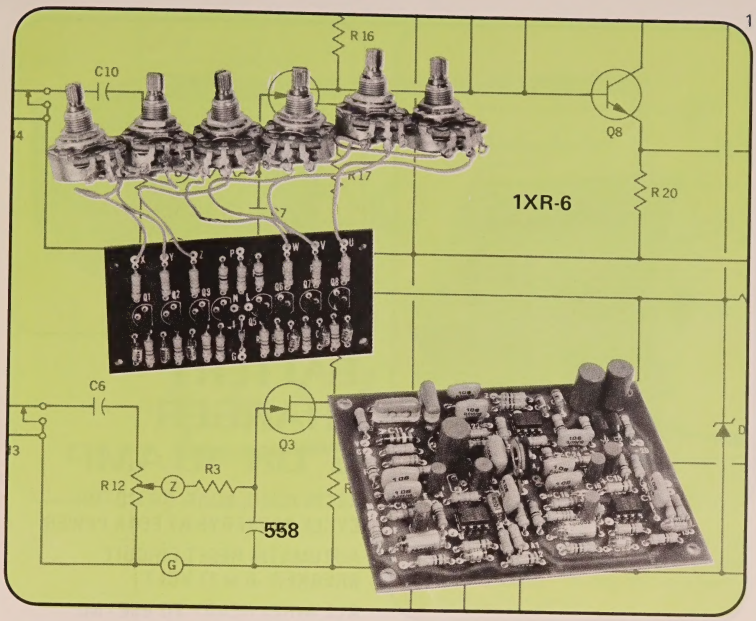
MMM Complete Amplifier, less cabinet, with reverb and both preamps - Amplifier cabinet size: 24½x9x7½". Shipping Weight 13 lbs. **$90.00**

(Prices of amplifier, preamp and reverb sections as separate items available on request.)

SPECIFICATIONS

Power Output ..... 60 Watts RMS
150 Watts Peak Power
Frequency Response ..... 20 Hz to 50 KHz
Dynamic Range..... 60 db without overloading
Complete control of Fuzz, Tremolo and Reverb

Southwest Technical Products Corporation, 219 W. Rhapsody, San Antonio, Texas



DUAL CHANNEL PREAMP 558

One straight preamp with only tone controls, one preamp with tremolo and reverb. All on 3¼x4½ circuit board. New op-amp circuit provides all these features and less than 0.1% distortion at 1.0 Volt output. Combine with one of our "Tiger" series, or 540 amplifiers for a complete system.

The circuit features the "558" dual op-amp integrated circuit, for consistent stable operation. Tremolo is controlled by a FET transistor for the cleanest smoothest modulation you have ever heard.

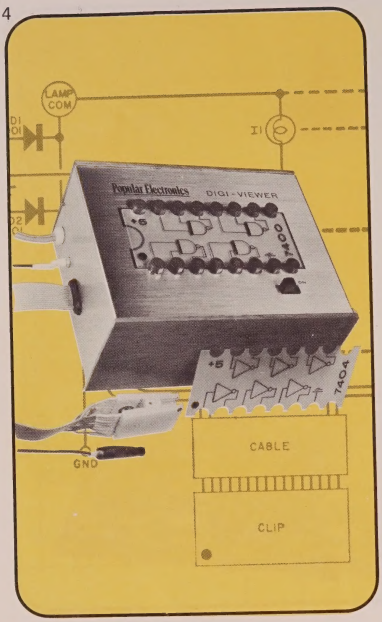
Kit is complete with all controls (9) but less the reverb spring. – "O.C." Z–1B.

'558' Preamp Kit - Shipping Weight 1 lb. . **$27.85**
Reverb Spring - Shipping Weight 2 lbs..... **$10.00**

6 INPUT MIXER

For those custom PA designs – Two channels with three inputs on each channel, or six inputs to one channel as needed. An individual FET high impedance input stage is used with individual volume controls for each input. The mixer cannot cause loading, or add noise to your system. Inputs of up to 0.5 Volts RMS may be used without overloading. Circuit gain of 3 in two channel, or unity if used on one channel allows addition of the mixer at almost any point in your system from the microphone to the power amplifier. Requires 12 to 24 Volts DC at 5 Ma. Complete with controls.

1xr-6 Kit - Shipping Weight 1 lb. **$13.75**

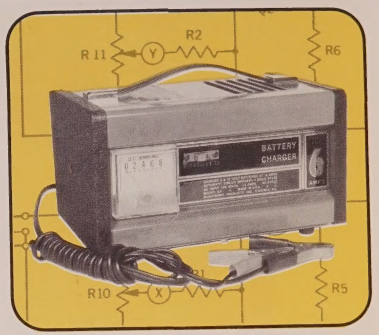


DIGI-VIEWER

AUTOMATIC – IN OPERATION TESTING OF DIGITAL INTEGRATED CIRCUITS

In-circuit dynamic testing of integrated circuits is now simple and inexpensive with the Digi-Viewer. The instrument consists of 16 lamps and a special clip which allows quick and easy connection to the pins. The lamps visually show whether the voltage at each pin is over, or under 1.4 Volts. Overlays are provided for all popular circuits, making it possible to see at a glance what is happening at the various pins of the entire package simultaneously.

VU Kit of all parts including case, clip and sheet of most used overlays - Shipping Weight 4 lbs. **$19.86**



BATTERY CHARGER 6 OR 10 AMP

KEEPS AUTO, BOAT, OR MOTOR-CYCLE BATTERYS AT PEAK POWER

AUTOMATIC RESET CIRCUIT BREAKER 6 or 12 VOLT

ALL WIRES READY TO USE - NO SOLDERING REQUIRED IN KIT

This high output battery charger is ideal for keeping those boat, cycle, snowmobile, truck and car batteries up to full charge. Both models feature all steel vented cases, 6 foot power and charging cables, insulated copper battery clamps, automatic circuit breakers riveted in place vinyl handles, large easy to read meter, high output transformers and full-wave selenium rectifiers. The kit may be assembled in less than an hour with only a screwdriver. All wires in the kits are supplied with push-on terminals and clips already attached at the factory. Easy step-by-step instructions supplied for assembly. Both models, 6 or 10 Amp, will supply up to 50% more than rated output on initial charging surge; tapers up 2 to 3 Amps as the battery comes up to full charge. Case is red with black crackle end plates.

B-6 6 Amp Battery Charger Kit - Shipping Weight 10 lbs. **$14.95**
B-6A Assembled 6 Amp Charger - Shipping Weight 10 lbs. **$17.50**
B-10 10 Amp Battery Charger Kit Shipping Weight 12 lbs. **$19.95**
B-10A Assembled 10 Amp Charger Shipping Weight 12 lbs. **$23.50**

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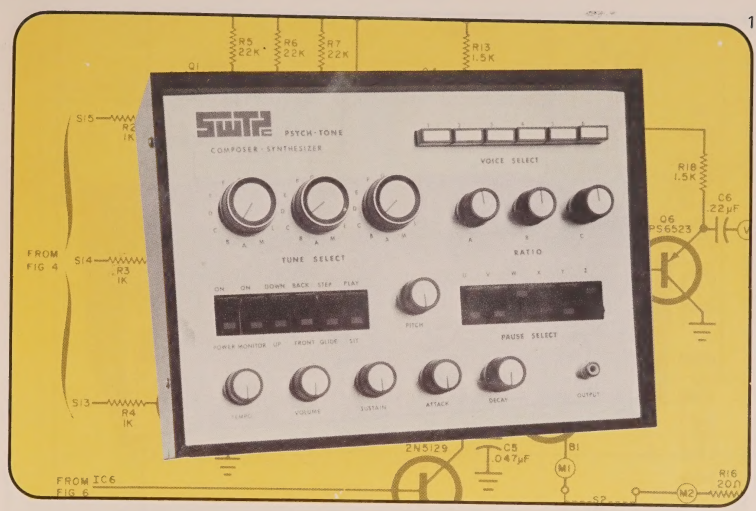


PSYCH-TONE

A PROGRAMMABLE MELODY SYNTHESIZER

WITH 28 CONTROLS AND A 63 NOTE MEMORY

Warning: Operation of this device in the presence of anyone over thirty may be hazardous to your health.

A new and unusual approach to music synthesis. The sounds produced by the Psych-Tone are modern – to say the very least – and operation is simple.

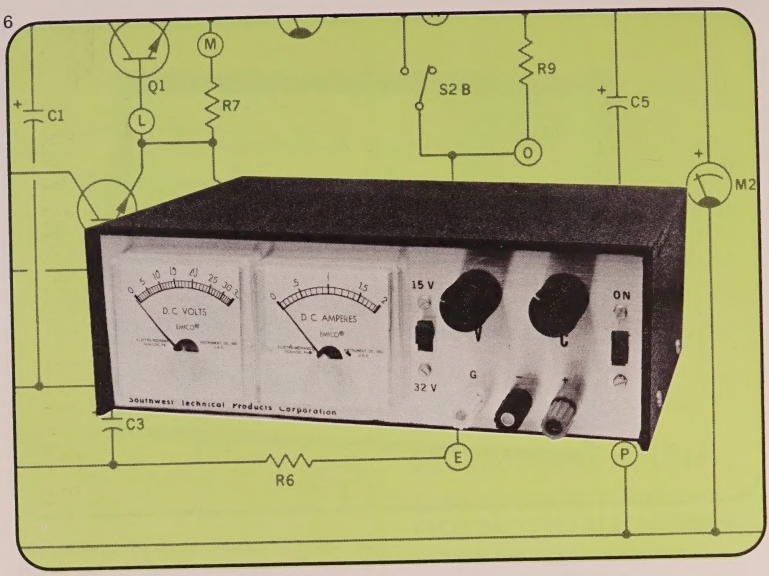
Basically a "psuedo random" sequence generator which operates as a tune computer, the Psych-Tone allows variation of the tempo, voicing, selection of pauses and tone shaping. The internal digital computer may be set for 1728 different 63 note sequences. These may be selected and combined with any of 63 pause combinations to produce 108,864 different melodic lines. These may be played at almost any tempo, pitch, or volume; backward or forward. Six different voices are provided and the user has full control of the attack, sustain and decay functions.

The wide flexibility of the controls makes possible sounds like a piano, violin, bagpipe, or something never heard before. On occasion, the music may sound familiar, but it is more likely to have science-fiction flavor with many wild tonal sequences.

The Psych-Tone has an internal monitor speaker, but preferably, it should be used with an external amplifier having reverb and tremolo to get the most exotic sounds.

PSY Psych-Tone kit complete with black vinyl covered case - 7"x10"x5" High - Not for beginners - Complex wiring involved.
Shipping Weight 6 lbs. **$53.15**

Southwest Technical Products Corporation, 219 W. Rhapsody, San Antonio, Texas



SHORT PROOF POWER SUPPLY

SAFE – ADJUSTABLE CURRENT LIMITING CIRCUITS PROTECT YOUR CIRCUIT AND SUPPLY FROM DAMAGE BY EXCESSIVE CURRENT DRAIN

0–35 VOLTS DC AT UP TO 2.0 AMPS

This high capacity variable voltage source not only will provide you with "rock stable" voltage for your experimental circuits, but will also provide protection against accidental shorts or circuit malfunctions. The over-current protection can be set for any amount of current that would be safe for your experiment. The supply will then "limit" current to this value or less. The power supply itself cannot be damaged by having its output leads shorted.

Cabinet is chrome finished on the inside. Front panel is our new brushed gold finish. This combined with the black vinyl covered top gives you a handsome instrument that looks far more expensive than it's actual modest cost.

143C Short-Proof Power Supply
Shipping Weight 8 lbs. **$39.50**

SPECIFICATIONS

Regulation .....1% or 0.1 Volt, whichever is greater for 0-100% load
Voltage Range ..... 0-32 Volts, 10 mA to 2 amperes, continuously adjustable
Stability..... Less than 20-MV drift (constant ambient temperature with fixed load) over a 6-hour period
Input ..... 105-125 Volts a.c.
Ripple ..... 0.003% or 10 mV r.m.s. maximum

Southwest Technical Products Corporation, 219 W. Rhapsody, San Antonio, Texas

PARCEL POST

Weight: I lb. and not exceeding (lbs.)	Local	1 & 2 Up to 150 miles	3 150 to 300 miles	4 300 to 600 miles	5 600 to 1,000 miles	6 1,000 to 1,400 miles	7 1,400 to 1,800 miles	8 Over 1,800 miles
2	$0.60	$0.65	$0.70	$0.75	$0.80	$0.90	$1.00	$1.05
3	.60	.75	.80	.85	.95	1.10	1.20	1.35
4	.65	.80	.85	.95	1.10	1.30	1.40	1.60
5	.70	.85	.90	1.05	1.20	1.45	1.65	1.90
6	.70	.95	1.00	1.15	1.35	1.60	1.85	2.10
7	.75	1.05	1.10	1.25	1.50	1.75	2.10	2.35
8	.75	1.10	1.15	1.35	1.60	1.90	2.30	2.60
9	.80	1.15	1.20	1.45	1.75	2.05	2.45	2.85
10	.80	1.20	1.30	1.55	1.90	2.20	2.65	3.10
11	.80	1.25	1.35	1.60	2.00	2.30	2.85	3.35
12	.85	1.30	1.45	1.70	2.10	2.45	3.05	3.55
13	.85	1.35	1.55	1.80	2.20	2.60	3.25	3.80
14	.90	1.40	1.60	1.90	2.35	2.75	3.45	4.00
15	.90	1.45	1.65	2.00	2.45	2.85	3.60	4.20
16	.95	1.55	1.75	2.05	2.55	2.95	3.80	4.40
17	1.00	1.60	1.80	2.15	2.65	3.10	3.95	4.60
18	1.00	1.65	1.90	2.20	2.75	3.20	4.15	4.80
19	1.05	1.70	2.00	2.30	2.85	3.35	4.30	5.00
20	1.05	1.75	2.05	2.40	2.95	3.50	4.50	5.20
21	1.10	1.85	2.10	2.45	3.05	3.65	4.65	5.40
22	1.15	1.90	2.15	2.55	3.15	3.75	4.85	5.60
23	1.15	1.95	2.20	2.60	3.25	3.90	5.00	5.80
24	1.20	2.00	2.25	2.65	3.35	4.05	5.15	6.00
25	1.20	2.05	2.30	2.75	3.45	4.15	5.35	6.20
26	1.20	2.10	2.35	2.85	3.55	4.30	5.50	6.40
27	1.25	2.15	2.40	2.90	3.70	4.45	5.65	6.60
28	1.25	2.20	2.45	2.95	3.80	4.60	5.80	6.80
29	1.30	2.25	2.50	3.05	3.90	4.70	5.95	7.00
30	1.30	2.30	2.55	3.10	4.00	4.85	6.10	7.20
31	1.35	2.35	2.65	3.20	4.10	5.00	6.25	7.40
32	1.40	2.40	2.70	3.30	4.20	5.15	6.45	7.60
33	1.40	2.45	2.75	3.35	4.30	5.25	6.60	7.80
34	1.45	2.50	2.80	3.40	4.40	5.40	6.75	8.00
35	1.45	2.55	2.85	3.45	4.50	5.55	6.90	8.20
36	1.45	2.60	2.90	3.55	4.60	5.65	7.10	8.40
37	1.50	2.65	3.00	3.65	4.70	5.75	7.25	8.60
38	1.50	2.70	3.05	3.70	4.80	5.90	7.45	8.80
39	1.55	2.75	3.10	3.80	4.90	6.05	7.60	9.00
40	1.55	2.80	3.15	3.85	5.00	6.15	7.75	9.20

UNITED PARCEL SERVICE

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1	$ .55	$ .57	$ .60	$ .62	$ .65	$ .68	$ .72	26	$1.80	$2.32	$2.97	$3.62	$4.40	$5.18	$6.22
2	.60	.64	.69	.74	.80	.86	.94	27	1.85	2.39	3.07	3.74	4.55	5.36	6.44
3	.65	.71	.79	.86	.95	1.04	1.16	28	1.90	2.46	3.16	3.86	4.70	5.54	6.66
4	.70	.78	.88	.98	1.10	1.22	1.38	29	1.95	2.53	3.26	3.98	4.85	5.72	6.88
5	.75	.85	.98	1.10	1.25	1.40	1.60	30	2.00	2.60	3.35	4.10	5.00	5.90	7.10
6	.80	.92	1.07	1.22	1.40	1.58	1.82	31	2.05	2.67	3.45	4.22	5.15	6.08	7.32
7	.85	.99	1.17	1.34	1.55	1.76	2.04	32	2.10	2.74	3.54	4.34	5.30	6.26	7.54
8	.90	1.06	1.26	1.46	1.70	1.94	2.26	33	2.15	2.81	3.64	4.46	5.45	6.44	7.76
9	.95	1.13	1.36	1.58	1.85	2.12	2.48	34	2.20	2.88	3.73	4.58	5.60	6.62	7.98
10	1.00	1.20	1.45	1.70	2.00	2.30	2.70	35	2.25	2.95	3.83	4.70	5.75	6.80	8.20
11	1.05	1.27	1.55	1.82	2.15	2.48	2.92	36	2.30	3.02	3.92	4.82	5.90	6.98	8.42
12	1.10	1.34	1.64	1.94	2.30	2.66	3.14	37	2.35	3.09	4.02	4.94	6.05	7.16	8.64
13	1.15	1.41	1.74	2.06	2.45	2.84	3.36	38	2.40	3.16	4.11	5.06	6.20	7.34	8.86
14	1.20	1.48	1.83	2.18	2.60	3.02	3.58	39	2.45	3.23	4.21	5.18	6.35	7.52	9.08
15	1.25	1.55	1.93	2.30	2.75	3.20	3.80	40	2.50	3.30	4.30	5.30	6.50	7.70	9.30
16	1.30	1.62	2.02	2.42	2.90	3.38	4.02	41	2.55	3.37	4.40	5.42	6.65	7.88	9.52
17	1.35	1.69	2.12	2.54	3.05	3.56	4.24	42	2.60	3.44	4.49	5.54	6.80	8.06	9.74
18	1.40	1.76	2.21	2.66	3.20	3.74	4.46	43	2.65	3.51	4.59	5.66	6.95	8.24	9.96
19	1.45	1.83	2.31	2.78	3.35	3.92	4.68	44	2.70	3.58	4.68	5.78	7.10	8.42	10.18
20	1.50	1.90	2.40	2.90	3.50	4.10	4.90	45	2.75	3.65	4.78	5.90	7.25	8.60	10.40
21	1.55	1.97	2.50	3.02	3.65	4.28	5.12	46	2.80	3.72	4.87	6.02	7.40	8.78	10.62
22	1.60	2.04	2.59	3.14	3.80	4.46	5.34	47	2.85	3.79	4.97	6.14	7.55	8.96	10.84
23	1.65	2.11	2.69	3.26	3.95	4.64	5.56	48	2.90	3.86	5.06	6.26	7.70	9.14	11.06
24	1.70	2.18	2.78	3.38	4.10	4.82	5.78	49	2.95	3.93	5.16	6.38	7.85	9.32	11.28
25	1.75	2.25	2.88	3.50	4.25	5.00	6.00	50	3.00	4.00	5.25	6.50	8.00	9.50	11.50

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C.O.D. Fees (in Addition to Postage)

Amount to be collected or insurance coverage desired	C.O.D. Fee
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$10.01 to $25	.80
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$50.01 to $100	1.00
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We can ship via Air Parcel Post, Parcel Post Special Handling, or Special Delivery, Air Express, Bus or Air Freight, if you so request. Contact your local office for rates and delivery information.

FOR FASTER SERVICE, SEND MONEY ORDER OR CASHIER'S CHECK

Southwest Technical Products Corporation, 219 W. Rhapsody, San Antonio, Texas

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(FIRST NAME) (MIDDLE INITIAL) (LAST NAME)

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Street Address _____

City _____ State _____
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Date _____

Insurance—We accept no responsibility for delivery of orders by the post office. Our liability is limited to the post office. We will not replace packages lost in the mails, unless the shipment was insured. Please enclose payment for insurance if you wish this order to be insured.

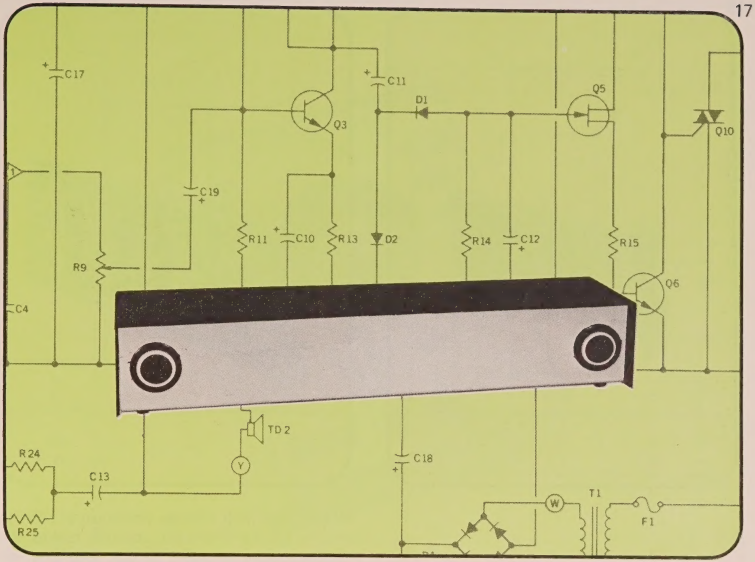
CATALOG NUMBER	HOW MANY	NAME OF ITEM	PRICE	TOTAL PRICE Dollars Cents	SHPG. WT. Lbs. Oz.

To determine the zone distance to a particular post office, ascertain the ZIP Code of the post office to which the parcel is addressed. The first three digits of that ZIP Code are included in this chart, and to the right thereof the zone.

Can be used for Parcel Post and U.P.S. Shipments

Zip Code Prefixes	Zone	Zip Code Prefixes	Zone	Zip Code Prefixes	Zone	Zip Code Prefixes	Zone	Zip Code Prefixes	Zone	Zip Code Prefixes	
006-009	8	299	6	410-412	6	562-567	6	700-705	4	824-834	6
010-039	7			413-414	5	570-571	5	706	3	835	7
040-049	8	300-312	5	415-418	6	572	6	707-722	4	836-837	6
050-098	7	313-314	6	420-427	5	573	5	723-724	5	838	7
		315-326	5	430-458	6	574-593	6	725-749	4	840-844	6
100-146	7	327-334	6	460-462	5	594-596	7	750-754	3	845	5
147	6	335-338	5	463-468	6	597	6	755	4	846-847	6
148-149	7	339	6	469	5	598-599	7	756-764	3	850-875	5
150-168	6	350-364	5	470	6			765	2	877-884	4
169-171	7	365-366	4	471-472	5	600-606	6	766-777	3	890-898	6
172-174	6	367-368	5	473	6	609	5	778-779	2		
175-199	7	369	4	474-479	5	610-611	6	780-782	1	900-937	6
		370-374	5	480-499	6	612-647	5	783-784	2	939-960	7
200-217	6	376	6			648	4	785	3	961	6
218-219	7	377-386	5	500-520	5	650-666	5	786-789	2	962-966	7
220-286	6	387	4	521	6	667	4	790-794	4	967-969	8
287-289	5	388	5	522-528	5	668-669	5	795-797	3	970-978	7
290-295	6	389-396	4	530-537	6	670-673	4	798-799	4	979	6
296	5	397	5	538	5	674-677	5			980-994	7
297	6			539-560	6	678-679	4	800-823	5	995-999	8
298	5	400-409	5	561	5	680-693	5				

The local zone rate applies to all parcels mailed at a post office or on its rural routes for delivery at that office or on its rural routes.



ULTRASONIC INTRUSION ALARM

EASY INSTALLATION

IMPOSSIBLE TO AVOID

AREA PROTECTION UP TO 400 SQUARE FEET

PROVEN "DOPPLER" TYPE DETECTION

NEW FET INPUT STAGE

FET – TRIAC DRIVER

Now you can equip your home with the same type intruder alarm system used by industrial plants, banks, and the IRS. The protected area is flooded with ultrasonic sound waves. Anything moving in the sound wave field causes a change in the amount of sound reflected back to the receiver and trips the alarm. This is the same "Doppler" principle used in Highway radar.

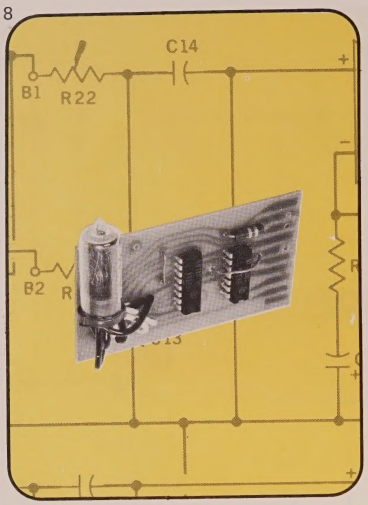
Easy installation – simply "aim" the unit at the area to be protected, and set the sensitivity. The integrated circuit and nine transistors operate on 12 Volts, so the alarm can be used in cars and boats too. The internal AC power supply will supply up to 1 Amp to any 12 Volt alarm device that is connected to the system.

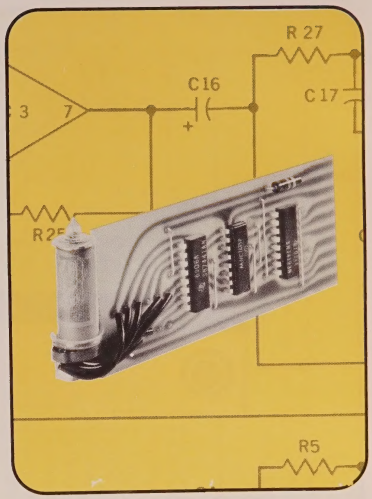
UA-2 Ultrasonic Alarm Kit.-
Shipping Weight 5 lbs. **$37.25**

SPECIFICATIONS

Size **13x3x2½**
Operating Frequency ..... **40 KHz**
Area Coverage ..... **Up to 200 Sq. Feet**
Controls ..... **Sensitivity and remote reset if desired**
Power Requirements ..... **117 Volts AC or 12 Volts DC**
Outputs ... **117 Volts AC or 12 Volts DC Available**

Southwest Technical Products Corporation, 219 W. Rhapsody, San Antonio, Texas





NIXIE COUNTERS

The most complete line of counter kits available. Now you can build your own custom digital instruments with any features and any type readout you prefer. Check the new lower prices on these all TTL Series 74 circuits.

NIXIE type—Our most economical counter. Counts 0 to 9 and resets. Complete with circuit board 7490, 7441, readout tube, wire solder, etc.

Standard TTL logic levels—counting speeds typically 20 MHz. Requires +200 Volts DC @ 4 Ma. and +5 Volts DC @ 50 Ma.
NX. **Decade** Counter Kit - 5 oz. **$9.95**

NIXIE type—Modulo 6—Same features as above counter, but counts 0 to 5 and resets. Complete with circuit board 7492, 7441, readout tube, wire, solder etc. Needed to build timers, clocks, etc.

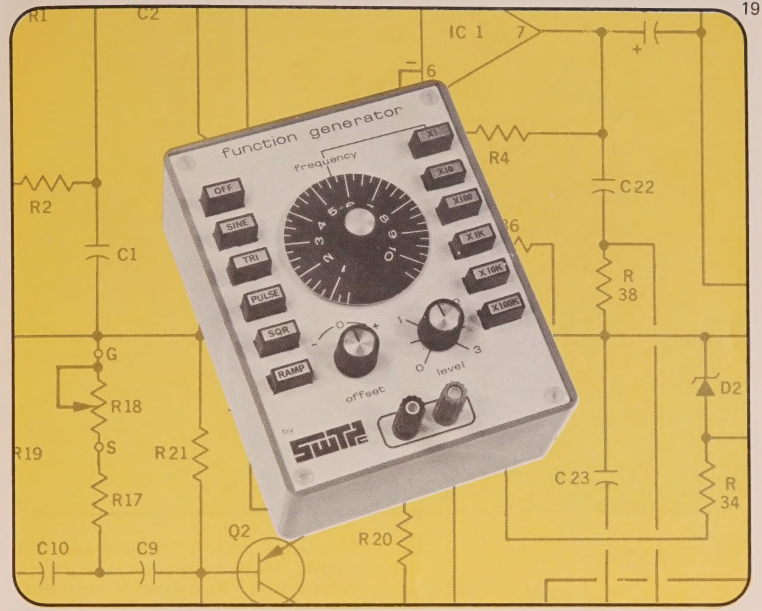
Logic Levels & power requirements same as # Nx-6. **Modulo** 6 Counter Kit - 5 oz. **$9.95**

NIXIE type with storage. Addition of storage circuit to our standard counter makes the readout more pleasant to use. The counter will display the previous count until a "strobe" pulse is applied to change to the next reading. This results in a continuous nonblinking display. Complete with 7490, 7475, 7441, circuit board, readout, wire, solder, etc. Counts 0 to 9 and resets.

Standard TTL logic levels. Requires +200 Volts DC @ 4 Ma. and +5 Volts DC @ 70 Ma.
SNx. **Decade** Counter with Storage Kit - 6 oz. **$12.95**

NIXIE type Up – down counter. Counting speeds of up to 32 MHz in either direction. —Storage—Counts any modulo from 2 to 10 —Present inputs. This counter has every feature that you might need for sophisticated instruments. The counter can either add, or subtract counts. The display changes only on command for nonblinking readout. The counter may be wired to count any modulo desired and any number may be entered in the counter before counting is begun. Complete with 74192, 7475, 7441, circuit board, readout tube, wire solder, etc.

Standard TTL logic levels. Requires +200 Volts DC @ 4 Ma and + 5 Volts DC @ 80 Ma.
Unx. **Up-Down Decade** Counter Kit - 8 oz. **$17.60**



FUNCTION GENERATOR

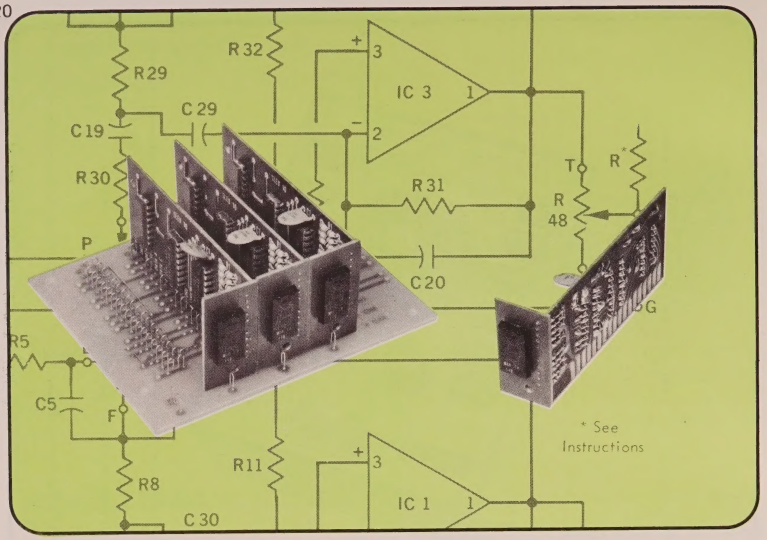
FIVE DIFFERENT WAVEFORMS – SINE – TRIANGLE – PULSE – SQUARE – RAMP
FROM 1.0 Hz to 1.0 MHz

Can you imagine a function generator with all these waveforms at less than 20% of the cost of anything else like it? This is the ideal signal generator for general purpose testing. Use it for checking audio equipment, digital circuits, sweep systems, or anywhere you need a versatile waveform source. The output amplitude is adjustable up to 2.5 Volts P-P at a source impedance of 70 Ohms. Output coupling may be either AC, or DC, with a ± 2 Volt adjustable offset. Accuracy is 2% of setting.

Construction is easy due to the use of printed circuit prewiring of all switches and plug together construction. All waveforms are generated by a special integrated circuit. The gray impact plastic case is only 5¼x6¾x2½ deep and the instrument weighs less than 2.0 lbs.

205-C Function Generator Kit -
Shipping Weight 3 lbs. **$39.95**

Southwest Technical Products Corporation, 219 W. Rhapsody, San Antonio, Texas



LED READOUT

LARGE MAN–1A READOUTS

PLUG-IN COUNTER CONSTRUCTION

BOTH DECADE AND MODULO 6 AVAILABLE

CHOICE OF MOTHER BOARDS

PARALLEL INPUTS & BCD OUTPUTS

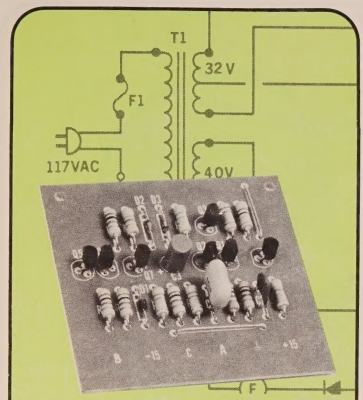
Now you can build digital projects with beautiful, rugged, large size LED readouts with a minimum of problems. Our mother board system combined with plug-in readout modules makes it possible to build a readout with the type and number of digits you want with a minimum of wiring and without special mounting hardware.

The readout modules use 8200 type TTL counters. These counters have typical counting speed of 25 MHz and parallel input terminals. This makes it possible to enter a number into the counter before actual counting is begun. Digital tuning indicators and "count down" type timers must have this feature. The four line BCD output from the counter is available on the mother board if needed. The counter output is stored by a 7475 latch circuit and displayed only upon command. This provides smooth "blink free" displays. The genuine MAN-1A readout display has 0.3 inch high seven segment type pattern. Connections are provided for variable brightness and for automatic blanking of unnecessary zero's.

The mother boards are available in four digit, six digit and timer-clock arrangements. All mother boards are complete with high speed buffer circuits for the strobe and reset lines. This reduces fan-in to a maximum of two on any mother board input line. Mother board kits contain all necessary hardware for plug-in counter kits above.

SLED-10 or SLED-6 Counter Kit complete with readout (one decade). 4 oz.	$14.95
MO-4 Mother Board Kit. 8 oz.	$4.50
MO-6 Mother Board Kit. 8 oz.	$5.50
TMO-7 Clock-Timer Mother Board Kit. 8 oz.	$6.00

Southwest Technical Products Corporation, 219 W. Rhapsody, San Antonio, Texas

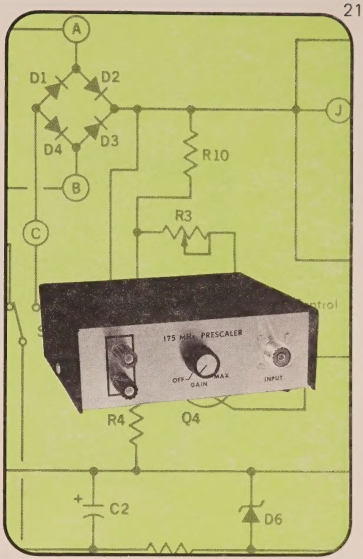


LESS THAN .01% DISTORTION
NOISE – 75 db BELOW FULL OUTPUT
± 1 db from 1 to 500,000 Hz
FOR PHONO CARTRIDGES, TAPE HEADS, OR MICROPHONES

195 PREAMP

We are happy to be able to offer a really outstanding preamp module for those who enjoy bullding up their own systems. The # 195 preamp is designed using integrated circuit techniques, but by using descrete components much better characteristics are obtained. It is impossible to get really superior noise figures in an IC preamplifier due to the processing steps that are required, each of which tends to add noise. It is also impossible to get precise resistor values and difficult to make both NPN and PNP transistors on the same chip. Our seven transistor circuit is a basic op-amp type system. You add the equalization needed for your application, just as you would with an IC' op-amp module. The 3 x 3 fiberglass circuit board is designed so that it may be wired, or plugged into PC edge connectors. Distortion is less than .01% at any audio frequency. Suggested power supply is ± 15 Volts DC @ 10 Ma. which may be obtained from any of our power amplifiers except # 140. Separate supply available.

#195 Preamp Kit
Shipping Weight 8 oz. **$9.75**



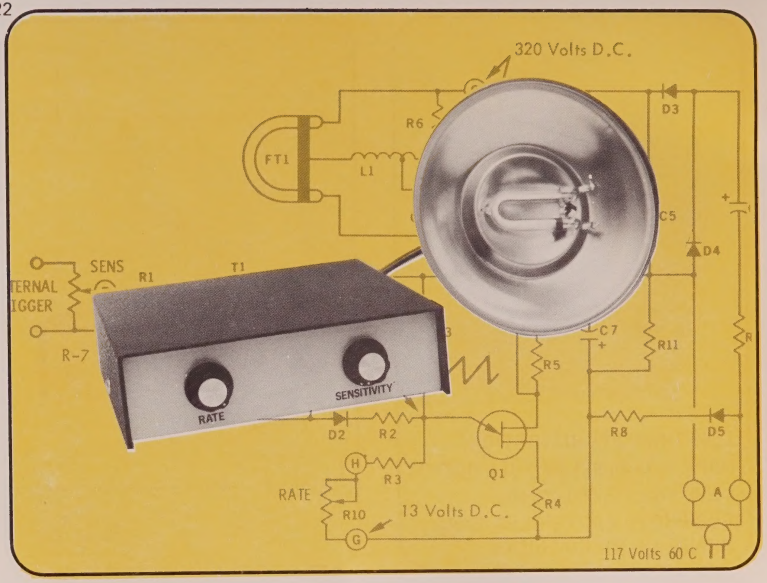
175 MHz FREQUENCY SCALER

– 10 SCALING 2 to 175 MHz
UP TO 10 VOLTS RMS INPUT
ECL CIRCUITS-TTL OUTPUT
USE WITH ANY COUNTER

Extend the range of your FC-2 or any other counter to 175 MHz. This prescaler uses emitter coupled logic circuits that will count directly to 175 MHz. Used in combination with any frequency counter, this will allow you to measure CB, Ham and 2-way frequencies into the VHF ranges.

Prescaler and its power supply are in a 6x5¼x2 metal case with vinyl covered top. Input sensitivity is 0.25 Volts RMS at 2 MHz decreasing to 0.5 Volts at 175 MHz. Output is 3.5 Volts for matching to TTL logic. This kit does the same job as similar equipment costing three times our price.

177 Prescaler Kit. 3 lbs. **$33.75**



PSYCHEDELIC STROBE LIGHT

WIDE RANGE OF FLASH RATES

FLASH HEAD REMOTE FROM CONTROL BOX

INPUT PROVIDED TO SYNCHRONIZE FLASHES WITH YOUR MUSIC

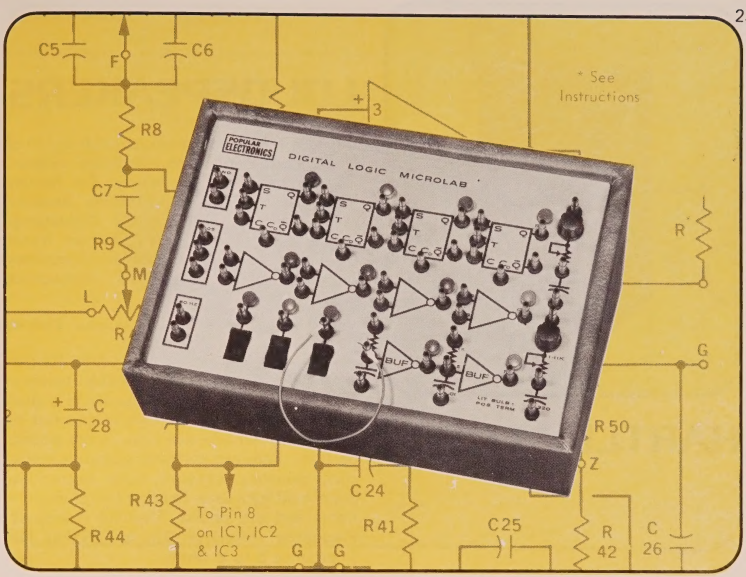
One of our most popular electronic kits, the Strobe Light, will delight adults as well as the "teen-scene". Aside from practical uses in photography and general purpose stop–motion observation, this psychedelic strobe light can create the most unusual effects seen with musical groups or "at home" parties. The strobe flashing at a proper rate synchronized with the music in a semi-darkened room produces an illusory and bizarre scene. It reminds one of the old time "flicks" and "The Keystone Kops". Musical groups need not limit their purchase to just one strobe. Experiment with several – The effect is incredible.

The punched cabinet is chrome plated. Top covering is textured black vinyl. Cabinet matches Sonolite Color organ. Polished 5½" reflector.

"Medical opinion concerning the use of strobe lighting in darkened rooms is 'cautionary'. Prolonged use may induce hallucinations or trigger undesired side-effects. It should not be used in the presence of anyone subject to epilepsy."

X–149C Psychedelic Strobe Kit.
Shipping Weight 2 lbs. **$17.50**
X-149A Assembled Psychedelic Strobe
Shipping Weight 2 lbs. **$29.95**

Southwest Technical Products Corporation, 219 W. Rhapsody, San Antonio, Texas



The Microlab makes it possible to quickly check, or understand a variety of digital circuits. The Microlab includes four flip-flops, four gates, two buffers and three bounceless switch circuits that can be used to make hundreds of basic logic circuits. Each logic block has a light to indicate its state. Three types of input signals are available on the panel. Connections are made with simple clip-on leads that require no soldering and are easy to attach and remove. The entire instrument is "goof proof". No possible combination of connections, no matter how wrong, can damage the circuits.

The kit is complete with AC power supply and vinyl covered outer case. An ideal companion for the Microlab is available. Don Lancaster's "RTL Handbook" presents basic digital logic in an easy to understand, non-mathematical manner. With this book and the Microlab anyone can have a good understanding of digital circuits in a very short time.

DIGITAL LOGIC MICROLAB

LEARN HOW DIGITAL CIRCUITS WORK

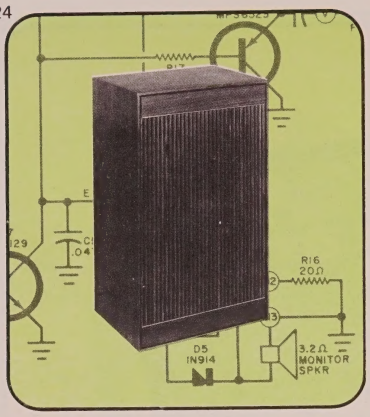
VERIFY DESIGNS QUICKLY

EXCELLENT TEACHING AID

DLM Complete Kit as shown - Shipping Weight 4 lbs. $29.95

"RTL Handbook" by Don Lancaster Shipping Weight 1 lb. $5.50

Southwest Technical Products Corporation, 219 W. Rhapsody, San Antonio, Texas



HARTLEY-LUTH

SYSTEMS

Hartely speaker systems are available in a wide range of sizes. From the new new Zodiac 72, to the magnificient Concertmaster VI.

All cabinets are hand crafted and built in matched pairs to insure a similar grain pattern on both speakers in a stereo system. Hartely systems use the unique "Soundsorber" acoustical treatment inside the cabinet to control resonances from the cabinet, and internal air volume. This almost totally eliminates undesirable "boom" and helps produce the natural sound that characterizes all Concertmaster systems.

Write for our free brochure illustrating all of the Hartley systems, and loudspeakers.

LOUDSPEAKERS

Provides the desired clean, smooth sound of a wide-dispersion direct-radiating speaker. Can be used to complement the Hartley 220MSG, 218MSG or 224MSG speakers. With magnetic suspension. All-polymer cone. Satin-finished cast aluminum frame. 6.1 pound Alcomax II magnet. Frequency response 1,000 to 25,000 Hz. Impedance 5 to 8 Ohms.

Model 207 MSG 7-Inch Midrange/Tweeter. . **$110.00**

The most advanced and versatile 10-inch speaker today, this unique speaker employs a two-section all-polymer cone and a dual voice coil which directs high frequencies to the tweeter section and lows to the woofer portion. Patented magnetic suspension principle precisely controls cone excursions. Supported by a satin-finished cast aluminum frame and 6.1 pound Alcomax II magnet. Frequency response 20 to 25,000 Hz. Impedance 5 to 8 Ohms.

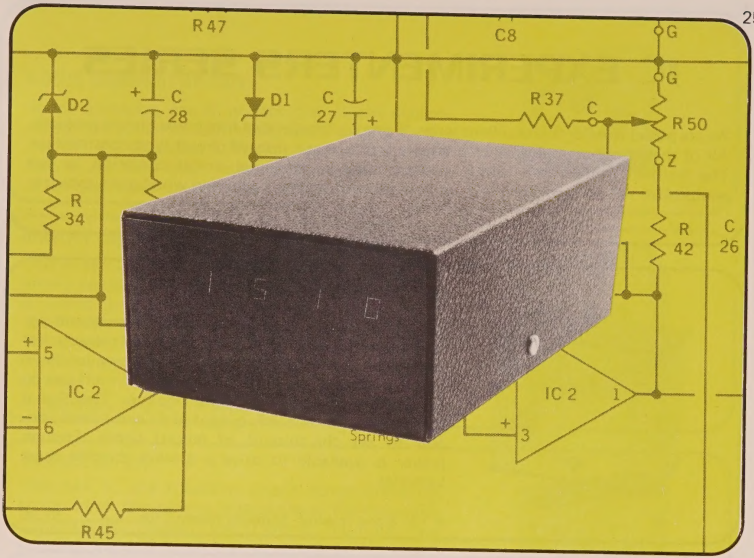
Model 220 MSG 10-Inch Full Range True Coaxial Speaker **$145.00**

This workhorse is capable of reproducing a 16-cycle pedal tone fundamental of the organ, easily and without coloration. Magnetic suspension capably handles the wide excursions produced by such low frequencies. The all-polymer cone delivers a tight, clean bass instead of the flabby-sounding lows heard on speakers with conventional paper cones. Satin-finished cast aluminum frame. Mammoth 14 pound magnet structure. Frequency response 16 to 4,000 Hz. Impedance 12 to 16 Ohms.

Model 218 MSG 18-Inch Bass Speaker . . **$225.00**

This two-foot woofer will handle the deepest sounds at volumes up to a thunder clap with remarkable clarity and distinction. This is the ultimate in bass reproduction. Novice or audiophile, the difference is clear to the ear. Magnetic suspension. Satin-finished cast aluminum frame. Mammoth 14 pound magnet structure. Frequency response 16 to 4,000 Hz. Impedance 12 to 16 Ohms.

Model 224 MSG 24-Inch Super Bass Speaker **$275.00**



DIGITAL TACHOMETER

400 to 9,990 RPM WITH NO RANGE CHANGING

4 DIGIT LED READOUT

WORKS WITH 4, 6 OR 8 CYLINDER ENGINES

At last it is ready. The instrument that many of our customers have requested. A high accuracy digital readout tachometer.This instrument measures your engines RPM ten times a second and displays it on four bright red 0.3 inch high LED readouts. The phase locked loop system used in this instrument allows ten times better accuracy than systems that simply count breaker point openings. This prevents large errors at low RPM's where the errors in some instruments can be 25% or more. Once calibrated properly this tachometer is accurate to ± one digit on the right most figure.

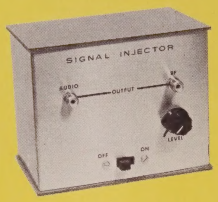
All connections are made on printed circuit boards. The six smaller boards are connected together by the etched pattern on the mother board that mounts them, for fool proof wiring accuracy. Only three wire connections in the whole kit. The Tachometer is housed in an attractive black vinyl covered aluminum box 4½ wide by 2½ high by 7 inches deep. May be mounted on top of, or under the dash in your car. Simple hookup - only+12 volts, ground and distributor point connections are needed.

TACH-1 Kit. Shipping weight 3.0 lbs. **$79.50**

Southwest Technical Products Corporation, 219 W. Rhapsody, San Antonio, Texas

IC EXPERIMENTERS SERIES

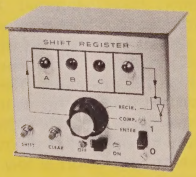
We are proud to offer this excellent series of simple, inexpensive integrated circuit projects. All of these projects make use of integrated circuits and printed circuit type construction. The finished projects are useful as demonstrators of digital circuit operation, or test equipment. All are packaged in a combination of brushed gold and wood grain cabinets.



SIGNAL INJECTOR -

A simple one IC circuit that produces a wideband signal that can be used from audio to several megacycles. The signal injection technique is a fast way to check radios and audio equipment. The entire circuit can be quickly tested with only one hookup. The Signal Injector has AF and RF output jacks and a level control to set the amount of output signal. Enough power is available to drive a speaker directly. Less batteries.

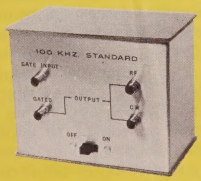
171 Signal Injector - Shipping Weight 2 lbs. **$7.30**



SHIFT REGISTER -

A four transistor, three IC project that demonstrates shift register operation of the type used in digital computers. This demonstrator will store information and feed it back in the same way as the memory in a large computer. This project requires .3 Amps for operation and must be used with a power supply as listed for these projects (SIP) or an equivalent power supply.

172 Shift Register - Shipping Weight 2 lbs. **$9.75**



100 KHz FREQUENCY STANDARD -

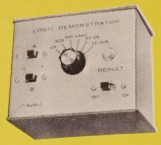
This simple one IC project will provide you with an accurate stable source of 100 KHz square waves. This is an ideal instrument for calibrating radio receivers, scopes and signal generators. It can also be used as a high frequency clock source for circuits involving digital IC circuits. A trimmer adjustment is provided so that the output can be beat against WWV, or any other primary standard for optimum accuracy.

173 100 KHz - Shipping Weight 2 lbs. **$10.85**

LOGIC DEMONSTRATOR -

A one transistor, one IC project that visually demonstrates the action of OR, NOR, AND, NAND, Exclusive OR, and Exclusive NOR digital gates. This project teaches the most basic action used in digital systems.

182 Logic Demonstrator - Shipping Weight 2 lbs..... **$8.25**



BINARY COUNTER -

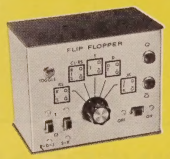
This three IC, four transistor project demonstrates the binary counting system. Each time the count button is pushed the counter advances to the next number in the "binary coded" decimal (BCD), or 8421 system. The circuit includes signal conditioning, counting and lamp driving circuits. This is another very basic digital concept.

183 Binary Counter - Shipping Weight 2 lbs. **$8.90**

FLIP-FLOPPER -

This two IC one transistor circuit demonstrates the action of all the various type of digital flip-flops; RS, Colocked RS, Toggle, Type D and JK flip-flops. Two switches are used to set a zero, or one on the inputs and a pushbutton is used to toggle the circuit. The result is displayed on two lamps that indicate the Q and Q states.

184 Flip-Flopper - Shipping Weight 2 lbs. **$8.50**



DUAL CLOCK -

This one IC two transistor project is actually a dual multivibratior circuit. The two output square waves can be any frequency from approximately 1 . Hz to 30 MHz. The frequency is determined by the size of the capacitor attached to the external posts. Output is 3.0 Volts P-P minimum with an external 5 Volt supply.

176C Dual Clock - Shipping Weight 2 lbs. **$9.70**

TWO-TONE ALARM -

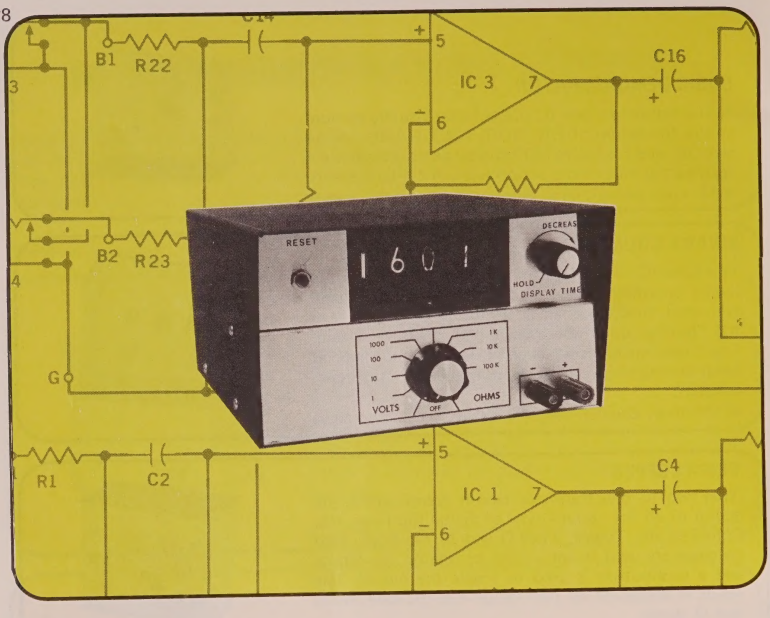
A one IC, one transistor circuit that produces a distinctive sound that cannot be missed anywhere. Useful as an alarm, signaling device, etc. Output switches from 500 to 1000 Hz five times a second. Less batteries.

181 No-Bounce Pushbutton
Shipping Weight 2 lbs. **$5.90**

NO-BOUNCE PUSHBUTTON -

An easy to build one IC project that is most useful for checking digital circuits. The integrated circuit is connected as a Set-Reset type flip-flop. This conditions the pushbutton signal and eliminates any bounce, or arcing that could result in multiple triggering of digital circuits being checked.

174 Two-Tone Alarm -
Shipping Weight 2 lbs. **$6.90**



UNIVERSAL DIGITAL INSTRUMENTS

The various instruments described here all use the same main frame, power supply and readout shown in the photo above. The Volt-Ohmmeter plug-in is shown installed. By using the same supply and readout for all of the instruments you can own a complete digital laboratory for considerably less than you could if complete instruments were purchased. The expensive portion of the instrument is used for all plug-in units saving needless duplication.

The power supply provides all necessary voltages for the four plug-in modules. The 3½ digit Nixie readout uses high speed TTL logic. Typical counting speed is 20 MHz. The all metal cabinet features brushed gold front panels and a black vinyl covered top. 8x4½x9 inches deep.

Cabinet power supply and readout as shown (less any plug-ins) - Shipping Weight 9 lbs. **$59.95**

VM-1 DIGITAL VOLT-OHMMETER

MEASURES UP TO 2000 VOLTS

10 MEG OHM INPUT IMPEDANCE

BETTER THAN .5% ACCURACY

DUAL-SLOPE CONVERSION

Now you can build a digital voltmeter with accuracy far better than any "meter readout" instrument. Not only do you get direct readout, but also a faster, more accurate, unambiguous reading with better resolution. Now thanks to new low cost integrated circuits you can own a superior instrument of this type for almost the same cost as an old fashioned meter job.

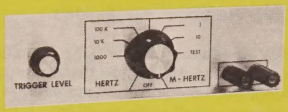
VM-1 Voltmeter Plug-in - Shipping Weight 2 lbs. **$29.95**

Southwest Technical Products Corporation, 219 W. Rhapsody, San Antonio, Texas

FREQUENCY COUNTER

Now everyone can afford to own a frequency counter. A counter is the ideal instrument for checking signal generator frequency, transmitter frequency, etc. Since the circuit actually counts each cycle of input signal the accuracy is within + 1 count or better. The circuit features a FET input of 1 Meg, or higher impedance, a synchronized switch gate system and variable display timing generator. Brushed gold panel to match main frame.

FC-2 Frequency Counter Plug-in Kit
Shipping Weight 2½ lbs. **$29.95**

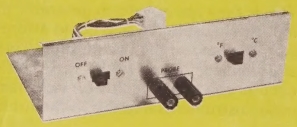


MEASURES FREQUENCY DIRECTLY
1,000 Hz to 20 MHz FULL SCALE RANGES
.01% ACCURACY-LINE TIME BASE

DIGITAL-THERMOMETER

Now temperature can be measured quickly and easily with a digital readout system. This plug-in makes it possible to measure or monitor temperature over a 70° to 80°F range with an accuracy of 1% or better. This is an ideal instrument for use in photography or chemical applications where temperatures must be constantly monitored. The electronic circuit makes sixty measurements every second and displays the result on the large bright main frame readout tubes.

THR–1C Complete kit with probe and chassis -
Shipping Weight 1.5 lbs. **$16.80**



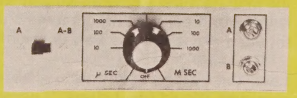
0–100° C OR 0–212° RANGE
INSTANT CHANGE FROM °C TO °F
60 SECOND MAXIMUM RESPONSE TIME

TIME PERIOD PLUG-IN

This instrument consists of a precision oscillator, divider circuits and a controlled gate. This instrument has six ranges and can be used to measure accurately the time interval over which an event occurs, or between two events; to as close as 20 Microseconds. Full scale ranges are .01, .1, 1, 10, 100 and 1000 seconds.

The counter may be started and stopped with a microphone, photocell, or switch. When the start signal occurs the gate routes the pulses from the oscillator into the counter. When the stop signal occurs the counter is stopped. The number of counts is directly proportional to the time between the two events. This instrument can be used to check camera shutter timing, bullet velocity and similar applications.

TM-2 Time Period Plug-in
Shipping Weight 2½ lbs. **$38.75**



Dear Electronic Kit Builders,

Welcome to our all new 1972-3 catalog of electronic kit projects. You will find several new items in this edition that are unique and we hope interesting. Our new "Headset Amplifier" should fill a need that has been obvious for some time. This amplifier is not just a small audio amplifier. It has been designed specially for use with headsets from the ground up. All of you who use headsets in your systems should find this an interesting project.

In response to many requests we have developed a digital readout tachometer. This instrument uses a high accuracy "phase locked loop" system that makes possible accurate RPM measurements all the way from 9,990 down to 100 RPM in one range. This kit is truly unique. Not only is it not available as a kit anywhere else, it is not available in any form from anyone else but SwTPC. Do not confuse this instrument with low accuracy "breaker Point opening" counters, or meter type tachometers. There is simply no comparison.

Also for the first time in this catalog we are offering a Function Generator kit. This is the type waveform generator that has become so popular with all of the industrial customers who could afford expensive instruments. This generator gives you any of the five most used waveforms at the push of a button and at any frequency from 1.0 Hz to 1.0 MHz. Thanks to some very new integrated circuits you can have this for less than $40.00 We are sure that others will also make instruments like this in the future, but we have it now.

We guarantee that you will be satisfied with your SwTPC kit. If you don't agree that it is an outstanding value, pack it up and ship it back to us. You will be given a prompt refund — Please do not ask for refunds on kits that have been damaged or assembled in any way.

We are quite proud of the quality of the parts and the engineering in our kit projects. You will find nothing but the best fiberglass circuit boards, first quality name brand semiconductors and quality film resistors. No surplus, no rejects, or reduced specification garbage is ever used in a SwTPC kit.

Quite a few of our customers have mentioned the fact that they were hesitant about purchasing our kits and other products because of the low prices. They supposed that there had to be a catch somewhere, or that we were selling cheap imported products. The truth is that we are setting our prices at a fair level for our way of selling these kits to you. Since you are buying by mail, directly from the manufacturer you are saving at least 1/3 since there is no retailers markup. If you don't believe this, compare our kits with others on the market. This should make it obvious who the ripoff is.

Later this year we have another "first" coming up. A new 250 Watt per channel amplifier. Would you believe "Tigersaurous"!!! Watch for it.

Daniel Meyer

TRANSISTORS

2N3055	$2.05
2N3528	1.63
2N3877	.47
2N4400	.60
2N4402	.60
2N4870	.75
2N4871	.68
2N4919	1.90
2N4922	1.48
2N5087	0.81
2N5129	.25
2N5139	.22
2N5210	.72
40409	1.14
40410	1.32
40668	1.58
L148B (2N5777)	$1.45
MJ802	4.86
MJ4502	5.26
MJE2955	2.90
MJE3055	1.50
MPS3638	.45
MPS6521	.90
MPS6523	.97
MPS6566	.57
MPU131	.79
SS1122	1.60
SS1123	1.35
TIS43	1.02
TIS58	.62

INTEGRATED CIRCUITS

SP321A	$2.48
SP380A	1.34
SP322B	2.75
MC717P	1.08
MC723P	1.35
MC724P	1.08
MC723P	1.35
MC724P	1.08
MC785P	1.25
MC789P	1.08
MC791P	2.35
MC799P	1.08
7400	.59
7402	.59
7404	.71
7441	3.25
7447	3.55
7473	1.18
7475	2.05
7476	1.30
7490	2.30
7492	2.30
74192	4.35
MC1303L	2.20
NE565A	4.35
NE540K	4.50
N5111A	2.65
N5558V	1.75
N8280A	2.10
N8288A	2.10
ECL 9528	5.60
7406	1.75
7493	2.30
LM311	4.75

DIODES AND RECTIFIERS

Germanium diodes	$ .15
VS-148 2 Amp Bridge	1.00
3.3 V zener (IN4728)	.50
3.9 V zener (IN4730)	.50
4.7 V zener (IN4732)	.50
5.6 V zener (IN4734)	.50
10 V zener (IN4740)	.50
24 V zener (IN4749)	.50
27 V zener (IN4750)	.50
36 V zener (IN4753)	.50
IN914 Silicon diode	.35
IN3754 Silicon diode	.32
IN5060 Rectifier - 1 Amp	.56
IN5624(CA-15) Rectifier - 3 Amp	.68
40583 - Trigger diode	.61

MISC.

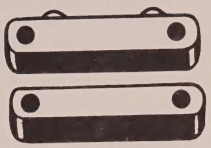
B5750-Nixie Readout	$6.75
ZM-1000 Nixie Readout	5.75
Socket (AM-1000) for 2m-1000	.60
MFT-110 Flash Tube	3.50
MAN-1A Readout	10.75

COMPUTERMATIC ALARM

FULLY AUTOMATIC - JUST TURN A KEY

PROFESSIONAL TYPE EQUIPMENT

THE ULTIMATE IN SWITCH & TAPE SYSTEMS



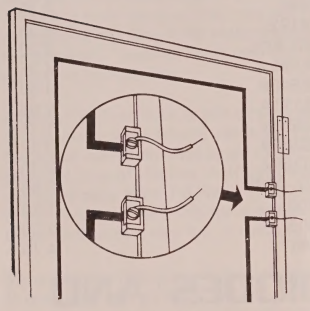
MAGNETIC SWITCHES

SIREN - 115 Volt AC motor driven. Suitable for outdoor installation. Very high sound output level.

SEE. Shipping weight 3 lbs. . . **$15.95**

MAGNETIC SWITCHES - for doors, or windows. Operate with up to 1/2 inch gap between switch and magnet. Potted reed type switch cannot be damaged by moisture, or corrode. Magnet will operate switch from any side. 2 3/15 x 1/2 x 1/2.

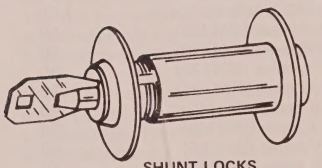
REE . . . . . **$2.35 ea.**



LEAD WINDOW FOIL

LEAD WINDOW FOIL - 3/8 wide - .0008 thick. Protects windows from being used to gain entrance. Lead foil will break and trip your alarm if the glass cracks. Blocks simplify connecting to the window tape.

Lead Tape - 1 lb. spool **$2.55**
Take-off Blocks . . . . . **.25**



SHUNT LOCKS

SHUNT LOCKS - with sleeve and two washers. Make it possible to enter a protected area without tripping the alarm. Furnished with two round type keys. These locks are much more difficult to pick than flat key types.

SSL . . . . . **$5.50 ea.**

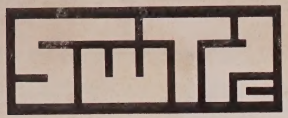
UNDERDOME BELL

UNDERDOME BELL - 8 inch, 6 Volt DC bell with heavy gauge steel gong. This bell will operate directly from our No. CA or No. UA-2 alarm systems. Will operate from standby battery if power line is cut.

UDB. Shipping Weight 6 lbs. **$11.25**

The most automatic and easy to use alarm system yet built. New digital integrated circuits as used in computers now make it possible to provide you with the ultimate in convenience. The control system uses a "solid, reliable" tape and switch protection system. To use this automatic alarm you simply insert the key and turn the system ON. If the protection loop is okay and all protected doors are closed, the green light goes on and you know that the system is armed. You may now go out ANY of the protected doors. The digital circuit counts "two" and prepares the circuit to trip the alarm on the next opening of the protection loop, all indicator lights go off. When any protected door is next opened, or window tape broken, the circuit trips the alarm and locks itself into this condition. You have up to 60 seconds to insert your key in the switch-lock and turn off the alarm. The amount of delay is adjustable from 5 to 60 seconds. If the system is not turned off with the key, the bell, light, siren, or whatever is used; goes on when the delay timer runs out.

CA Alarm Kit -
Shipping Weight 5 lbs. $19.50



Southwest Technical Products Corporation 219 W. Rhapsdy San Antonio, Texas 78216

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